Roy Luo

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Education

University of Waterloo Sep 2023 – Dec 2026
Financial Analysis and Risk Management & Statistics, Co-op *Waterloo, Ontario*

McMaster University Sep 2022 – Apr 2023
Mathematics and Statistics *Hamilton, Ontario*

Experience

Investment Analyst Intern Sep 2024 – Present
University Pension Plan Ontario (UPP) *Toronto, ON*

- Developed and enhanced macroeconomic factor-based asset allocation models to acheive target asset mix under downside risk, volatility, liability and liquidity constraints.
- Conducted pre and post-investment analysis for $400M in private and public market investments, assessing alignment with target sectoral/geographical exposures and impact on total fund and asset risk-return profile.
- Performed scenario and sensitivity analysis to forecast the impacts of geopolitical shocks and rate/FX changes to support fund-level investment decisions.

Risk Modelling Intern Jan 2025 – May 2025
Alberta Investment Management Corporation (AIMCo) *Toronto, ON*

- Developed and improved on total fund credit risk models across a $170B multi-asset portfolio consisting of 26 clients with a focus on fixed income, private credit and private equity investments.
- Improved and monitored reports that track counterparty exposure, credit VaR and FX exposure for $20B+ in derivatives and structured products.
- Enhanced internal credit scoring frameworks and credit risk methodology and transitioned them to Blackrock's Aladdin risk management system, flagging and mitigating high-risk exposures worth $100M+.

Data Engineering Intern Sep 2024 – Dec 2024
Questrade Financial Group *Toronto, ON*

- Designed data validation pipelines using GCP Dataform and BigQuery to ensure 99.9% data accuracy across 100+ tables.
- Built and optimized data warehouse schemas to handle 1M+ queries monthly, improving query performance by 25%.
- Assisted in developing financial dashboards in PowerBI, enabling real-time insights for 10+ teams across the organization.

Investment Risk Intern Jan 2024 – Apr 2024
Healthcare of Ontario Pension Plan (HOOPP) *Toronto, ON*

- Engineered a stress testing tool that evaluated the impact of real rate fluctuations on billions in both liabilities and fixed-income holdings using data from Snowflake, SAP HANA and SQL Server.
- Automated dynamic hedging calculations using Python, reducing manual processing time by 10 hours a week and delivering 100% reporting accuracy.
- Streamlined the process for generating liquidity risk reports using matplotlib, reducing the turnaround time by 33% and ensuring compliance with financial regulations.

Data Analyst Intern May 2023 – Aug 2023
Precision Insight Consulting *Toronto, ON*

- Imported equity/bond trades using built-in Simcorp Dimension tools, mapping them to transaction codes and performing instrument type validation with a 99.5% accuracy rate.
- Configured and managed batch jobs for data extraction, optimizing data handling and processing efficiency, saving 15 hours per month of manual work.
- Constructed reference files documenting daily CAD/USD settlements in Excel and NAV reconciliation reports in Python, reducing reporting errors by 100% and enhancing data accessibility and accuracy.

Technical Skills

Programming Languages: Python, R, SQL, C
Tools: PowerBI, Excel, Word, Powerpoint, Git, Aladdin, Bloomberg
Languages: English, Mandarin, French